

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY



(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

REC'D 26 APR 2006

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Applicant's or agent's file reference	FOR FURTHER ACTION		See Form PCT/PEA/416
International application No. PCT/GB2005/001300	International filing date (day/month/year) 01.04.2005	Priority date (day/month/year) 02.04.2004	
International Patent Classification (IPC) or national classification and IPC INV. G06F9/46			
Applicant SYMBIAN SOFTWARE LIMITED			
<p>1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of 5 sheets, including this cover sheet.</p> <p>3. This report is also accompanied by ANNEXES, comprising:</p> <p>a. <input checked="" type="checkbox"/> sent to the applicant and to the International Bureau) a total of 8 sheets, as follows:</p> <p><input checked="" type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).</p> <p><input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.</p> <p>b. <input type="checkbox"/> (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) , containing a sequence listing and/or tables related thereto, in electronic form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).</p>			
<p>4. This report contains indications relating to the following items:</p> <p><input checked="" type="checkbox"/> Box No. I Basis of the report</p> <p><input type="checkbox"/> Box No. II Priority</p> <p><input type="checkbox"/> Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</p> <p><input type="checkbox"/> Box No. IV Lack of unity of invention</p> <p><input checked="" type="checkbox"/> Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</p> <p><input type="checkbox"/> Box No. VI Certain documents cited</p> <p><input type="checkbox"/> Box No. VII Certain defects in the international application</p> <p><input type="checkbox"/> Box No. VIII Certain observations on the international application</p>			
Date of submission of the demand 01.02.2006		Date of completion of this report 26.04.2006	
Name and mailing address of the international preliminary examining authority:  European Patent Office - P.B. 5818 Patentlaan 2 NL-2280 HV Rijswijk - Pays Bas Tel. +31 70 340 - 2040 Tx: 31 651 epo nl Fax: +31 70 340 - 3016		Authorized officer de Man, A Telephone No. +31 70 340-4527 	

**INTERNATIONAL PRELIMINARY REPORT
ON PATENTABILITY**

International application No.
PCT/GB2005/001300

Box No. I Basis of the report

1. With regard to the **language**, this report is based on
- ☒ the international application in the language in which it was filed
 - ☐ a translation of the international application into , which is the language of a translation furnished for the purposes of:
 - ☐ international search (under Rules 12.3(a) and 23.1(b))
 - ☐ publication of the international application (under Rule 12.4(a))
 - ☐ international preliminary examination (under Rules 55.2(a) and/or 55.3(a))
2. With regard to the **elements*** of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report):*

Description, Pages

1-5, 8-16	as originally filed
6, 7, 7a	received on 02.02.2006 with letter of 31.01.2006

Claims, Numbers

1-31	received on 02.02.2006 with letter of 31.01.2006
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Drawings, Sheets

1/1	as originally filed
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- ☐ a sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing

3. ☐ The amendments have resulted in the cancellation of:
- ☐ the description, pages
 - ☐ the claims, Nos.
 - ☐ the drawings, sheets/figs
 - ☐ the sequence listing (*specify*):
 - ☐ any table(s) related to sequence listing (*specify*):
4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).
- ☐ the description, pages
 - ☐ the claims, Nos.
 - ☐ the drawings, sheets/figs
 - ☐ the sequence listing (*specify*):
 - ☐ any table(s) related to sequence listing (*specify*):

* If item 4 applies, some or all of these sheets may be marked "superseded."

**INTERNATIONAL PRELIMINARY REPORT
ON PATENTABILITY**

International application No.
PCT/GB2005/001300

Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	1-31
	No: Claims	
Inventive step (IS)	Yes: Claims	
	No: Claims	1-31
Industrial applicability (IA)	Yes: Claims	1-31
	No: Claims	

2. Citations and explanations (Rule 70.7):

see separate sheet

Re Item V

**Reasoned statement with regard to novelty, inventive step or industrial applicability;
citations and explanations supporting such statement**

1 Reference is made to the following document:

D1: Cherepov, "Hard Real-Time With RTX on Windows NT" (July 1999)

2 Document D1 discloses, using the wording of claim 1 insofar as possible,

a computing device comprising a scheduler incorporating an algorithm for ordering the running of threads of execution having different priorities (page 107, right-hand column, lines 8-19; RTSS scheduler); and

wherein a ready list is kept of threads which are scheduled to run on the device, ordered by priority (page 107, right-hand column, lines 20-30; ready queue per priority);

the device further comprising at least one locking mechanism for blocking access to a resource of the device from all threads except for a thread that holds the locking mechanism (page 107, right-hand column, lines 43-49; access to an object is blocked for a high priority thread while a low priority thread holds the object);

and wherein, when a scheduled thread is blocked from running because the resource it requires is locked, the thread which holds the lock is caused to run (page 107, right-hand column, lines 43-49; the effective priority of the low priority thread that holds the object is promoted to that of the high priority thread, thereby implicitly causing it to run),

from which the subject-matter of claim 1 differs in that the blocked thread is not removed from its place on the ready list.

This difference merely relates to an implementation detail of the priority inheritance scheme. The fact that the blocked thread is not removed from the ready list does not

by itself imply any technical advantage over what is disclosed in document D1. Not removing a blocked thread from the ready list, but, for example, flagging it as blocked, is therefore regarded as an obvious design possibility for the skilled person.

Thus the subject-matter of claim 1 does not involve an inventive step (Article 33(3) PCT).

- 3 The subject-matter of independent claims 17 and 18 largely corresponds to the subject-matter of claim 1, which is found to lack inventive step. Thus, for substantially the same reasons as above, the subject-matter of claims 17 and 18 is not new either (Article 33(3) PCT).
- 4 The additional features of dependent claims 2, 4, 19 and 21 are also disclosed by document D1, see page 107, right-hand column, lines 8-30.

Thus the subject-matter of claims 2, 4, 19 and 21 does not involve an inventive step (Article 33(3) PCT).

- 5 Dependent claims 3, 5-16, 20 and 22-31 specify obvious and well-known features that merely define implementation details of the scheduler and locking mechanism, not affecting the actual scheduling scheme or achieving any non-obvious technical advantages. These features are therefore not considered to contribute to an inventive step.

Thus the subject-matter of claims 3, 5-16, 20 and 22-31 does not involve an inventive step (Article 33(3) PCT).